

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 June 2001 (21.06.2001)

PCT

(10) International Publication Number
WO 01/44170 A1

(51) International Patent Classification⁷: **C07C 235/46**,
237/30, 233/65, 233/01, 233/88, A61K 31/166, 31/167,
A61P 37/00

(21) International Application Number: **PCT/SE00/02505**

(22) International Filing Date:
12 December 2000 (12.12.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
9904651-8 17 December 1999 (17.12.1999) SE
0015744.6 27 June 2000 (27.06.2000) GB
0017942.4 22 July 2000 (22.07.2000) GB

(71) Applicant (for all designated States except US): **ASTRAZENECA AB** [SE/SE]; S-151 85 Södertälje (SE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ALCARAZ**, Lilian [FR/GB]; AstraZeneca R & D Charnwood, Bakewell Road, Loughborough, LE11 5RH (GB). **CAFFREY**, Moya [GB/GB]; AstraZeneca R & D Charnwood, Bakewell Road, Loughborough, LE11 5RH (GB). **FURBER**, Mark [GB/GB]; AstraZeneca R & D Charnwood, Bakewell Road, Loughborough, LE11 5RH (GB). **LUKER**, Timothy [GB/GB]; AstraZeneca R & D Charnwood, Bakewell Road, Loughborough, LE11 5RH (GB). **MORTIMORE**, Michael [GB/GB]; Vertex Pharmaceuticals Ltd., 88

Milton Park Abingdon, Oxfordshire OX14 4RY (GB). **PIMM**, Austen [GB/GB]; AstraZeneca R & D Charnwood, Bakewell Road, Loughborough, LE11 5RH (GB). **THORNE**, Phillip [GB/GB]; AstraZeneca R & D Charnwood, Bakewell Road, Loughborough, LE11 5RH (GB). **WILLIS**, Paul [GB/GB]; AstraZeneca R & D Charnwood, Bakewell Road, Loughborough, LE11 5RH (GB).

(74) Agent: **GLOBAL INTELLECTUAL PROPERTY**; AstraZeneca AB, S-151 85 Södertälje (SE).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

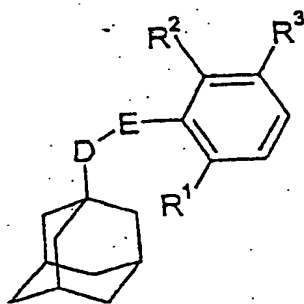
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

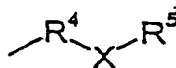
— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **ADAMANTANE DERIVATIVES**



(I)



(II)

(57) Abstract: The invention provides adamantane derivatives of formula (I), a process for their preparation, pharmaceutical compositions containing them, a process for preparing the pharmaceutical compositions, and their use in therapy. In formula (I) D represents CH₂ or CH₂CH₂, E represents C(O)NH or NHC(O) and R³ represents a group of formula (I).

WO 01/44170 A1